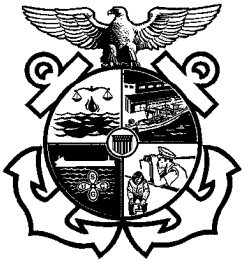
United States Coast Guard



FOREIGN FREIGHT VESSEL EXAMINATION BOOK

Name of Vessel	**Flag** No Change	
IMO Number	**Case Number**	
Date Completed	**Priority**	**Points**
Location		
Vessel Built in Compliance with SOLAS: 60 74 74/78 NA		
Exam Type Annual Reexamination		
Port State Control Officers **1.** _____ **3.** _____ **2.** _____ **4.** _____		

CG-840 FV
Rev. 1/99

Total Time Spent Per Activity:

Regular Personnel (Active Duty)			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Reserve Personnel			
ACTIVITY TYPE	ACTIVITY	TRAINING	(PERS) MI

TOTAL ADMIN HOURS	TOTAL TRAVEL HOURS

Auxiliary Resources	
TOTAL BOAT HOURS	TOTAL AIRCRAFT HOURS

Use of Foreign Freight Vessel Examination Book:

This examination book is intended to be used as a job aid by Coast Guard port state control officers during boardings of foreign-flagged freight vessels only. This book contains an extensive list of possible examination items. It is not, however, the Coast Guard's intention to "inspect" all items listed. As a port state responsibility, port state control officers must verify that the vessels and their crews are in substantial compliance with international conventions and applicable US laws. The depth and scope of the examination must be determined by the port state control officers based on their observations.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, CFR's, the Port State Control Job Aid, NVIC's, or any locally produced cite guides for specific regulatory references. Although not all items in this book are applicable to all vessels, Section 1 should be filled out in its entirety at each examination and reexamination.

NOTE: *Guidance on how to examine foreign freight vessels can be found in MSM Volume II, Chapter 22: Procedures Applicable to Foreign Freight Vessels.*

Guide to Examinations:

☐ Annual examination and reexamination

◇ Annual examination only

○ Expanded examination as required

These three stages are only a general guide. Each port state control officer should determine the depth of the examination necessary. A checked box should be a running record of what has been examined by the port state control officer. It does not imply that the entire system has been examined or that all or any items are in full compliance.

NOTE: *A reexamination normally includes an examination of the vessel's documents, certificates, and licenses, in addition to a "walk-through" of the vessel.*

Pre-inspection Items

- Review MSIS records.
  - PSVH
  - VFIP
- Obtain copies of forms to be issued.

Post-inspection Items

- Issue letters/certificates to vessel.
  - Record of deficiencies
- Complete MSIS entries within 48 hours.
  - PSAR
  - MSDS
  - PSDR
  - VFLD
  - VFIP

Table of Contents:

Section 1: Administrative Items

IMO Applicability Dates:

Reference	Date
SOLAS 1960	26 MAY 65
SOLAS 1974	25 MAY 80
1978 Protocol to SOLAS 1974	01 MAY 81
1981 Amendments (II-1 & II-2)	01 SEP 84
1983 Amendments (III)	01 JUL 86
Various additional amendments to SOLAS	
MARPOL 73/78 Annex I	02 OCT 83
MARPOL 73/78 Annex II	06 APR 87
MARPOL 73/78 Annex III	01 JUL 92
MARPOL 73/78 Annex V	31 DEC 88
IBC Code	After 01 JUL 86
BCH Code	Prior to 01 JUL 86
COLREGS 1972	15 JUL 77
Various additional amendments to COLREGS	
Load Line 1966	21 JUL 68
STCW 1978	28 APR 84
1991 Amendments	01 DEC 92
1994 Amendments	01 JAN 96
1995 Amendments	01 FEB 97

Involved Parties & General Information:

Owner's Agent
Individual
Phone Number

Charterer's Agent
Individual
Phone Number Same as Owner's Agent

Owner—Listed on DOC (if applicable), or COFR
No Change

Operator
No Change

Vessel Information:

Classification Society	
ISM Issuer: Same as above? Yes No If not the same, which Recognized Organization? _____	
NOTE: *The period of validity for ISM documents should correspond to the following list. If they do NOT, ISM documents should be further investigated.* ☐ *5 years = Full term (SMS and DOC)* ☐ *12 months = Interim (DOC)* ☐ *6 months = Interim (SMC)* ☐ *5 months = Short term (SMC)*	
Last Drydocking Date	Next Drydocking Date
Location of Last Drydocking	
Date of Last Class Survey	
Outstanding conditions of class or non-conformities	
Last Port of Call	Next Port of Call
Cargo	Current Operations

Call Sign	No Change (VFID)
Gross Tons	No Change (VFMD)
Built Date (use delivery date)	No Change (VFCD)
Overall Length (in feet)	No Change (VFMD)

Vessel Description:

Container Vessel Bulk Carrier

Vehicle Carrier Other _____

Section 2: Certificates and Documents

International Certificates:

Name of Certificate	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
Certificate of Registry No Change						
Classification Document No Change						
Certificate of Financial Responsibility (COFR) No Change	USCG					
Safety Construction (SLC) No Change						
Safety Equipment (SLE) No Change						
Safety Radio (SLT) No Change						

Name of Certificates	Issuing Agency	ID #	Port Issued/ Country	Issue Date	Exp. Date	Endors. Date
Cargo Ship Safety (CSS) No Change						
International Load Line (ILL) No Change						
International Oil Pollution Prevention (IOPP) No Change						
International Tonnage (ITC) No Change						
Safety Management (SMC) No Change						
Document of Compliance (DOC) No Change						

Manning Certification:

☐ Safe Manning Document	SOLAS 74/78 V/13 IMO Res.A.481(XII)
• Manning in accordance with document ***NOTE:*** *If vessel does not have a Safe Manning Document or is not manned in accordance with Safe Manning Document, local Consulate must be contacted and the deficiency resolved prior to vessel's departure from port.*	
• Review copy of crew list	
☐ Officers' certificates	STCW 95 I/2 STCW 95 I/10 STCW 95 VI/1 STCW 95 VI/2
• Master and chief engineer licenses current	
• Navigating and engineering officers' licenses current; ***NOTE:*** *3000 kW = 4023 HP*	
• Flag endorsement	
• Medical certificates	
☐ Crew documents	STCW 95 VI/1
• Documents current	
• Medical certificates valid (issued by flag state)	
• Minimum age 15	ILO 147 Art. II
☐ Rest periods	STCW 95 VIII/1
• Review watch schedules	

Logs and Manuals:

☐ Lifesaving equipment maintenance record	SOLAS 74/78 III/19
• Periodic checks as required	
• Visual inspection of survival craft / rescue boat and launching appliances	
• Operation of lifeboat / rescue boat engines	
• Lifesaving appliances, including lifeboat equipment examined	
☐ Emergency training and drills	SOLAS 74/78 III/18
• Onboard training in use of lifesaving equipment (all crew members)	
• SOLAS training manual	
• Logbook records	SOLAS 74/78 III/18.5
• Weekly and lifeboat drills	SOLAS 74/78 III/25

Notes: _____

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☐ Bridge log — 33 CFR 164.25, STCW 95 I/14
- Pre-arrival tests conducted
- Casualties (navigation equipment and steering gear failures reported) — 33 CFR 164.53
- Steering gear drills
- Emergency steering drills

☐ Exemptions to SOLAS certificates — SOLAS 74/78 I/4

Pollution Prevention Records:

☐ Current pollution prevention records
- Person-in-charge — 33 CFR 155.700
- Transfer equipment tests and inspections — 33 CFR 156.170
- Declaration of Inspection — 33 CFR 156.150

◇ Oil record book (Part 1) (spot-check) — MARPOL Ax. I/20, 33 CFR 151.25
- Each operation signed by person-in-charge
- Each complete page signed by master
- Book maintained for 3 years

◇ Shipboard oil pollution emergency plan — MARPOL Ax. I/26.1, 33 CFR 151.26
- Approved by flag state / class society
- Contact numbers correct
- Immediate Actions List

◇ Vessel response plan (vessels carrying oil as secondary cargo) — 33 CFR 155.1045, 33 CFR 155.1030

Notes:_____

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◇ Oil transfer procedures — 33 CFR 155.720

- Posted / available in crew's language
- List of products carried by vessel
- Description of transfer system including a line diagram of piping
- Number of persons required on duty
- Duties by title of each person
- Means of communication
- Procedures to top off tanks
- Procedures to report oil discharges

Cargo Records:

☐ Packaged hazardous materials

- Dangerous Cargo Manifest — SOLAS 74/78 VII/5
- Division 1.1 or 1.2 explosives (check for required permit for designated dangerous cargo) — 49 CFR 176.30, 49 CFR 176.100
- Training records (check records of crew members considered to be hazmat employees) — 49 CFR 172.700-704
- DOT hazmat registration — 49 CFR 176.13, 49 CFR 107.601

☐ Bulk solid hazmat

- Special permit on board (unlisted cargoes only) — 46 CFR 148.01-7
- Shipping papers — 46 CFR 148.02-1
- DCM on board — 46 CFR 148.02-3
- Cargo inspections carried out and logged — 46 CFR 148.03-7

Notes: _____

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Section 3: General Examination Items

Navigation Safety:

- ☐ Charts and publications for US waters/ intended voyage — 33 CFR 164.33
  - Current and corrected charts
  - US Coast Pilot
  - Sailing directions
  - Coast Guard Light List
  - Tide tables
  - Tidal current tables
  - International Rules of the Road
  - Inland Rules of the Road
  - International Code of Signals
  - Plotting equipment — 33 CFR 164.35
- ☐ Operationally test radar(s) and ARPA — 33 CFR 164.35, 33 CFR 164.37, 33 CFR 164.38
  - 2 required if over 10,000 GT
  - Operate independently
  - ARPA acquires targets
- ☐ Compasses — 33 CFR 164.35
  - Illuminated gyrocompass with repeater at stand
  - Illuminated magnetic compass
  - Current deviation table
- ☐ Test electronic depth sounding device and recorder — 33 CFR 164.35
  - Accurate readout
  - Test all transducers
  - Continuous recorder (chart)
- ☐ Electronic position fixing device — 33 CFR 164.41
  - Location accurate
- ☐ Indicators — 33 CFR 164.35
  - Illuminated rudder angle indicator
  - Centerline RPM indicator
  - Propeller pitch (CPP systems)
  - Speed and distance indicators — 33 CFR 164.40
  - Lateral thrusters

Notes: _____

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☐	Communications • VHF radio	SOLAS 74/78 IV/6.3 33 CFR 26.03
☐	Steering gear instructions • Instructions • Emergency instructions • Block diagram	33 CFR 164.35
☐	Maneuvering facts sheet with warning statement	33 CFR 164.35
☐	Radiotelephone (VHF-FM)	33 CFR 26.03 & 26.04
☐	EPIRB (406 MHz) • Float-free amount • Battery date current • Hydrostatic release	SOLAS 74/78 IV/7.1.6
☐	GMDSS • Additional radio equipment for area of operation	SOLAS 74/78 IV/8 SOLAS 74/78 IV/9 SOLAS 74/78 IV/10 SOLAS 74/78 IV/11
◇	Operationally test bridge steering • Test power/control pumps independently • Test follow-up and non-follow-up controls • Rudder angle indicator accurate • Activate loss of power alarm	SOLAS 74/78 II/1-29
◇	GMDSS lifeboat radios (VHF) • 3 if over 500 GT • Operable condition	SOLAS 74/78 III/6.2
◇	9 GHz radar transponder (SART) • Vessels > 300 GT and < 500 require 1 • Vessels > 500 GT require 2 • Stowed so to be rapidly placed in survival craft, or stowed in survival craft	SOLAS 74/78 III/6.2 NVIC 9-93

Notes: _____

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◇ Emergency source of power (radio) — SOLAS 74/78 IV/13

- Independent of ship's power system
- 1 or 6 hour time duration
- Battery system
- Battery charger

◇ NAVTEX — SOLAS 74/78 IV/7.1.4

◇ Radio installation — SOLAS 74/78 IV/6.2

- Safe installation
- Independent lighting
- Marked with call sign

General Health and Safety

☐ Accident Prevention and Occupational Health — COMDTINST 16711.12A, ILO 147

- Rails, guards, protective clothing and equipment, warning signs posted in crew work areas

☐ Crew accommodations — COMDTINST 16711.12A, ILO 147

- Habitable conditions
- Adequate lighting and ventilation
- Free of cargo and stores
- Individual berths

☐ Hospital space — COMDTINST 16711.12A, ILO 147

- Designated for ships ≥ 500 GT with 15 or more crew on voyage of more than 3 days
- Not used for stowage or berthing
- Properly operating toilet

☐ Galley — COMDTINST 16711.12A, ILO 147

- Sanitary conditions
- Hot and cold-running water
- Adequately equipped to prepare food
- Mess hall provided for crew

Notes: _____

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☐ Refrigerator and stores spaces — COMDTINST 16711.12A, ILO 147

- Storage free of insects

☐ Sanitation — COMDTINST 16711.12A, ILO 147

- Toilets working (1/8 crew)
- Showers operate (1/8 crew)
- Wash basins
- Lighted / heated / ventilated
- Reasonably clean

☐ General safety — COMDTINST 16711.12A, ILO 147

- Safe access to all spaces
- Spaces adequately lighted
- No electrical hazards
- Warning notices posted as necessary

☐ Muster lists and emergency instructions

- Available for each person — SOLAS 74/78 III/8
- Posted in conspicuous places
- Language understood by crew
- Shows crew member duties — SOLAS 74/78 III/53

Structural Integrity

NOTE: *Request records of Outstanding Conditions of Class. (Form or format may vary depending on classification society.) Conditions of Class may identify structural defects, wastage, etc. Conditions may also identify ships overdue for drydocking, repair or other required service.*

☐ Hull structure — ICLL 66 Reg. 1

- Frame pulling away
- Fractures in corners
- Holes in main decks
- Leaks / patching on ballast tanks
- Bulkheads / decks warped
- Excessive wastage

Notes: _____

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☐ Side shell, accessible structural members, decks, cargo hatches and superstructure — ICLL 66 Reg. 1

- Fractures, corrosion, wastage, pitting or damage to the extent that it may impair ship's seaworthiness
- Excessive doublers, postage stamp inserts, cement boxes or soft patches
- Welding burn marks or other evidence of recent repair work
- Load line marked in accordance with certificates — ICLL 66 Regs. 4 - 9
  - Hailing port
  - Name
- Railings

☐ Hatch covers — ICLL 66 Regs. 13 - 16

- Holes in covers
- Frames pulling away
- Gaskets / compression bar
- Coaming
- Hydraulics systems
- Wastage / coatings

☐ Watertight/weathertight openings

- Watertight doors, gaskets, dogs — ICLL 66 Reg. 12
- Other openings (means of securing) — ICLL 66 Regs. 13 - 18
- Vents, air pipes and closing appliances — ICLL 66 Regs. 19 & 20

Ground Tackle:

◇ Anchor and windlass (spot-check)

- Foundations
- Drive units
- Guards
- Covers for moving parts
- Brake pads
- Deck fittings
- Electrical (wiring) or hydraulic piping

Notes: _____

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◇ Mooring winches / capstans

- Foundations
- Cables / hooks
- Boom
- Brake
- Electrical (wiring) or hydraulic piping
- Ladders / rails

Cargo Operations:

☐ Cargo securing manual — SOLAS 74/78 VI/5.6; SOLAS 74/78 VII/6.6

☐ Packaged hazmat

- Hazmat containers stowed in accordance with stowage plan and DCM — SOLAS 74/78 VII/6; 49 CFR 176.30
- Unsafe / damaged containers — 49 CFR 176.50
- Leaking / damaged packages — SOLAS 74/78 VII/4
- Placarding — 49 CFR 172.50
- "No Smoking" signs posted — 49 CFR 176.60

☐ Bulk solid hazmat

- Stowage conditions observed — 46 CFR 148.03-11
- Special additional requirements — 46 CFR 148.04
- Additional requirements of special permit — 46 CFR 148.01-11

☐ Cargo ventilation systems — SOLAS 74/78 II-2/53

- Continuously running
- Remote controls outside space
- Indicators on bridge

☐ Hazardous wiring — SOLAS 74/78 II-2/53

- Lights and fixtures
- Wiring

☐ Ramps / watertight doors — ICLL 66 Reg. 21

- Watertight integrity
- Seals
- Locking arrangements
- Controls / warning alarms

Notes: _____

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Lifesaving Equipment:

☐ Lifeboats / rescue boats

- Required number — SOLAS 74/78 III/26
- Hull integrity and fittings — SOLAS 74/78 III/19.2
- Engine starts

Stbd Lifeboat	Port Lifeboat	Lifeboats
Engine equipped	Engine equipped	Wooden
Engine tested	Engine tested	Fiberglass
Lifeboat lowered	Lifeboat lowered	Steel
		Covered
Free fall lifeboat with rescue boat		

☐ Davit system — SOLAS 74/78 III/19.2, SOLAS 74/78 III/48

- Structure and foundation
- Roller tracks
- Lubrication (evidence of use)
- Falls; end for end / renew (2.5 / 5 years)
- No obstructions to lowering

☐ Embarkation area — SOLAS 74/78 III/11.7

- No obstructions
- Embarkation ladder
- Launching instructions — SOLAS 74/78 III/9
- Emergency lighting

☐ Liferafts — SOLAS 74/78 III/19

- Required number — SOLAS 74/78 III/26
- Stowage — SOLAS 74/78 III/29
- Float-free arrangement
  - Hydrostatic release / weak link
- Annual servicing (hydrostatic release and inflatable liferaft) — SOLAS 74/78 III/19.8.1, SOLAS 74/78 III/19.9.1
  - 17 months, if Administration-approved
- Launching instructions posted — SOLAS 74/78 III/9
- Bow / stern station
  - Lashed down on deck or in marked location
  - Lifejackets available

Notes: _____

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☐ Lifebuoys (spot-check)

- Condition — SOLAS 74/78 III/19.2
- Bridge location — SOLAS 74/78 III/7.1
  - Quick release system
  - Smoke and light float
- Deck location
  - 50% with waterlights
- Retro-reflective tape — SOLAS 74/78 III/30.2.7

☐ Lifejackets—watchstanders and crew (spot-check)

- Condition — SOLAS 74/78 III/19.2
- Stowage — SOLAS 74/78 III/7.2.2
- Retro-reflective material — SOLAS 74/78 III/30.2.7
- Light — SOLAS 74/78 III/27.2
- Whistles — SOLAS 74/78 III/32.1.6

☐ Line-throwing appliances (spot-check) — SOLAS 74/78 III/17

- 4 charges

☐ Pyrotechnics (spot-check) — SOLAS 74/78 III/6.3

- 12 distress flares

☐ Immersion suits and thermal protective aids (spot-check) — SOLAS 74/78 III/27.3

- Condition — SOLAS 74/78 III/19.2
- Retro-reflective material — SOLAS 74/78 III/30.2.7

Fire Protection:

☐ Fire control plan — SOLAS 74/78 II-2/20

- Permanently exhibited
- Language of flag state
- Copy permanently stored in weathertight container outside deckhouse

Notes: _____

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☐ Portable fire extinguishers (spot-check) — SOLAS 74/78 II-2/6.5

- Good condition / available for immediate use
- Located on stations
- Serviced at periodic intervals

☐ International shore connection — SOLAS 74/78 II-2/19

☐ Means of escape from accommodation, machinery, and other spaces

- Two required (some exceptions) — SOLAS 74/78 II-2/45
- Dead end corridors

☐ Fire doors (spot-check) — SOLAS 74/78 II-2/46, SOLAS 74/78 II-2/47

- Machinery space and stair towers
- Not tied or blocked open
- Installed closure devices working

☐ Fire detection systems (spot-check)

- Smoke / fire alarms — SOLAS 74/78 II-2/13
- Remote pull stations — SOLAS 74/78 II-2/11.8
- Smoke / flame / heat detectors and sensors — SOLAS 74/78 II-2/53

◇ Test operation of fire main system

- Required number of fire pumps — SOLAS 74/78 II-2/4
- Location of pumps
- Pumps, hydrants, piping, hoses, and nozzles in good condition and available for immediate use — SOLAS 74/78 II-2/21

◇ Structural fire protection (spot-check) — SOLAS 74/78 II-2/42

- Bulkheads
- Insulation
- Ventilation
- Penetrations

Notes: _____

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◇ Fixed fire extinguishing systems: cargo, machinery, and other spaces — SOLAS 74/78 II-2/21

- Tanks, cylinders, piping, controls, alarms, and release mechanisms in good condition and available for immediate use

Type of system: (circle appropriate type)			
Low Pressure CO_2	High Pressure CO_2	Halon	Foam

Pollution Prevention: (spot-check at reexaminations)

☐ Pollution placard posted — 33 CFR 155.450

☐ MARPOL V placard posted — MARPOL Ax. V/9

☐ Garbage

- Shipboard garbage properly disposed — MARPOL Ax. V/3
- Incinerator — 33 CFR 151.63
  - Evidence of use (clinkers)
  - Safety of burner assembly
  - Electrical controls
- Garbage Management Plan — MARPOL Ax. V/9

☐ Oil and hazmat

- Fuel oil and bulk lubricating oil discharge containment — 33 CFR 155.320
- Prohibited oil spaces — 33 CFR 155.470

☐ Oily-water separating equipment, bilge alarm, and bilge monitor — MARPOL Ax. I/16, 33 CFR 155.380

- Alarm, recorder
- Standard Discharge Connection — 33 CFR 155.430

Notes: _____

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☐ Marine sanitation device

- Type (I, II, or III) — 33 CFR 159.7
- Nameplate — 33 CFR 159.55
- Placard — 33 CFR 159.59

Machinery Spaces:

☐ Main and auxiliary machinery installations

- General housekeeping — SOLAS 74/78 I/11(a)
- Fire hazards
- Shock and electrical hazards — SOLAS 74/78 II-1/45.1
- Personnel hazards (moving parts not protected, hot surfaces, etc.) — SOLAS 74/78 II-1/26
  - Leaking fuel oil piping or fittings
  - Sea chests, sea valves / spool pieces in good condition
- Tank tops and bilges free of oil — SOLAS 74/78 II-2/15
- Watertight doors — SOLAS 74/78 II-1/23
  - Hand / power operation
  - Local / remote control
  - Alarm

☐ Steering gear machinery — SOLAS 74/78 II-1/29

- Linkages
- Hydraulic leaks
- Ram guides
- Lubrication

◇ Operationally test main and auxiliary steering gear — SOLAS 74/78 II-1/29

- 28-second operation (if applicable)
- Systems operate independently
- Unusual vibrations / leaks
- Ram hunting
- Limit switches
- Communications with bridge
- Steering gear instructions (block diagram)

Notes: _____

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◇ Main ship service generators — SOLAS 74/78 II-1/41

NOTE: *Two independent sources of power required.*

- F/O piping
- Cooling lines
- Controls

◇ Emergency generator room — SOLAS 74/78 II-1/43

- Test operation of prime mover
- Personnel safety
- Ventilation adequate
- Electrical switchboard
  - Grounds

◇ Bilge pumps — SOLAS 74/78 II-1/21

- Two required

Notes:_____

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Section 4: Drills

◇ Fire Drill:

Initial notifications	Familiarity with duties	Space isolation
General alarms / signals	Familiarity with equipment	Smoke control
Crew response	Fire pumps started	Communications w/ bridge
Properly dressed / equipped	Two jets of water	
Language understood by crew	Fire doors and dampers	

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.i; NVIC 6-91)

Location: _____ Time on Scene: _____

Notes: _____

◇ Abandon Ship Drill:

General alarms / signals	Familiarity with duties	Boat operation
Muster lists	Provide equipment	Egress procedures
Muster of crew	Familiarity with equipment	Davit-launched liferaft drill
Crew response	Lower lifeboat	Communication w/ bridge
Language understood by crew	Brake operation	Lighting
Lifejackets	Engine start	

(SOLAS 74/78 III/18.3; MSM Vol. II/22.C.7.h)

Location: _____ Time to Water: _____

Notes: _____

Section 5: Expanded Examination Items

Manuals and Instructions:

- ○ Check for presence (in appropriate language) of the following documents
  - Instructions for maintenance and operation of all installations / equipment for fighting and containing a fire — SOLAS 74/78 II-2/20
  - Training manual for lifesaving appliances — SOLAS 74/78 III/18.2
  - Instructions for onboard maintenance of lifesaving appliances — SOLAS 74/78 III/51
  - Stability booklet, associated stability plans and information — SOLAS 74/78 III/19.3, SOLAS 74/78 III/52, SOLAS 74/78 II-1/22, ICLL 66 Reg. 10
- ○ Cargo gear certificate
- ○ Grain loading manual — SOLAS 74/78 VI/9.1
  - Bulk vessel (stability and grain manuals often combined)
- ○ Human Factors — STCW Code
  - Determine if the appropriate crew members are able to understand the information given in manuals, instructions, etc., relevant to the safe condition of the ship and its equipment, and that they are aware of the requirements for maintenance, periodical testing, training, drills, and recording of logbook entries.

Safety Management System (SMS):

NOTE: *Requirements and guidance for inspecting vessel Safety Management Systems are detailed in SOLAS 74/78, Chapter IX and NVIC 4-98.*

- ○ Documentation (may be in the form of a Safety Management Manual)
  - Controlled documents
  - Safety and Environmental policy
  - Master of vessel familiar with SMS
  - Language understood by crew
  - Documentation identifies:
    - Written procedures kept on board vessel
    - Essential or critical equipment identified (or a separate manual containing this information)
    - Procedures for reporting non-conformities
    - Company's designated person(s) (name or title, and address)

Notes: _____

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○ Company's training program conducted in accordance with STCW — STCW I/14

NOTE: *Documented procedures established to ensure new personnel and personnel transferred to new assignments are given proper familiarization with their duties.*

- Proper documentation
- Training conducted before crew is assigned shipboard duties
- Essential instructions are documented and provided before sailing

○ Crew familiar with SMS issues

- Ship's officers
  - Documented procedures
  - Preventative procedures for essential equipment
  - Reporting requirements for non-conformities and able to identify typical scenarios that may result in a documented non-conformity
- Master and chief engineer familiar with internal audit procedures (e.g., know how many audits required per year and have participated in at least one) in addition to requirement's for ship's officers

○ Documented maintenance system

- Documented in writing and computerized versions
- Readily available and in language understood by those who use them
- Procedures are followed
- Records maintained

○ Vessel-specific procedures are documented in writing and address the following areas:

NOTE: *Not mandatory that they follow the exact format listed below.*

- Preventative maintenance
- Navigation
- Bunkering operations
- Emergency preparedness
- Pollution prevention
- Technical procedures
- Communications

Notes: _____

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- ○ Audits
  - Internal audits conducted as specified by SMS
    NOTE: *Do NOT examine internal audit records.*
  - External audit results reviewed
    - Status of open non-conformities relevant to deficiencies leading to detention
    - Status of implementation of corrective and preventative measure
- ○ SMS review conducted by Master in accordance with procedures in SMS
  - Non-conformities identified
  - Report of non-conformity prepared and sent in accordance with procedures established by SMS

Navigation Safety:

- ○ Test navigation equipment listed in Section 3 to the extent necessary to determine if equipment is operating properly.
- ○ Human Factors (spot-check): determine if deck officers are familiar with the following items:

  STCW Table A-II
  NVIC 3-98

  - Operation of bridge control and navigational equipment
  - Use of nautical publications and charts
  - Ship maneuvering characteristics
  - Lifesaving signals
  - Bridge procedures, instructions, manuals, etc.
  - Changing steering from automatic to manual and vice versa
  - Preparations for arrival and departure
  - Communications with engineroom
  - Use of VHF
  - Raising the alarm
  - Abandon ship drill and fire drill

Notes: _____

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○ Lights, shapes, and sound signals • Navigation lights • Sound signals • Distress signals	72 COLREGS
○ Radio log	SOLAS 74/78 IV/17
○ Radio operation • Transmit on 2182 MHz and Ch. 6, 13, 16, 70	SOLAS 74/78 IV/7
○ INMARSAT communications	SOLAS 74/78 IV/7.1.5

Cargo Operations:

○ Hazmat	
• Emergency Response Information	49 CFR 172.600
• Packages properly marked and labeled	49 CFR 172.300-450
• All labeled and placarded cargoes listed on DCM	49 CFR 176.30
• Proper stowage and segregation	49 CFR 176, Subparts C & D
○ Human Factors: determine if personnel are familiar with the following items:	STCW Table A-II/III
• Hazardous material regulations	49 CFR 176.57
• Special requirements (e.g., loading, segregation, firefighting equipment, etc.) for particular cargoes	
• Dangers posed by the cargo	
• Measures to be taken for cargo emergencies	

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Lifesaving Equipment:

○ Lifeboats/liferafts/rescue boats	
• Ensure effective operation of winches, davits, falls, sheaves, etc. (Lower at least one lifeboat to the water.)	SOLAS 74/78 III/19
• Test lifeboat and rescue boat flemming gear and/or engines	
• Verify presence/condition of lifeboat equipment	SOLAS 74/78 III/41
• Retro-reflective tape	
• Lighting	SOLAS 74/78 III/11.4
○ Emergency communication equipment	
• 2-way VHF radiotelephone apparatus	SOLAS 74/78 III/6.2
• Radar transponders	
• Survival craft EPIRBs	
• Onboard communication and alarm system	SOLAS 74/78 III/6.4
○ Line-throwing appliance	SOLAS 74/78 III/17.49
• Specifications and equipment	
○ Pilot ladders and hoists in good condition	SOLAS 74/78 V/17
○ Distress signals	SOLAS 74/78 III/6.3
• 12 red rocket parachute flares	

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Fire Protection:

○ Structural fire protection • Bulkheads and decks meet applicable fire integrity requirements • Openings (e.g., doors, ductwork, electrical wires, piping, etc.) constructed so that they do not destroy fire resistance of bulkheads • Manual and automatic fire doors examined / tested	SOLAS 74/78 II-2/42, 43, 44, 46, 47 49, & 50
○ Fire detection, fire alarm, and automatic sprinkler systems fitted where required and operating properly	SOLAS 74/78 II-2/52
○ Ventilation systems • Main inlets and outlets of all ventilation spaces can be closed from outside ventilated space • Power ventilation capable of being shutdown from outside ventilated space	SOLAS 74/78 II-2/48
○ Fire pumps • Fire main activated; water pressure satisfactory (energize forward-most and highest hydrants)	SOLAS 74/78 II-2/4
○ Paint lockers and flammable liquid lockers protected by an appropriate fire extinguishing arrangement	SOLAS 74/78 II-2/18.7
○ Special arrangements in machinery spaces • Machinery space ventilating fans can be shut down from outside spaces • All openings capable of being closed from outside machinery spaces • Machinery driving forced / induced draft fans, oil fuel transfer pumps, and other fuel pumps fitted with remote shutdowns located outside space concerned	SOLAS 74/78 II-2/11

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- ○ Firemen's outfits (spot-check) — SOLAS 74/78 II-2/17.3
  - Two lockers
  - Two outfits
  - Protective clothing
  - Helmet, boots, and gloves
  - Lamp
  - Ax
  - Breathing apparatus and lifeline
- ○ Fixed fire extinguishing arrangements in cargo spaces for vessels ≥ 2000 GT — SOLAS 74/78 II-2/53.1
  - Vessels with ro-ro spaces — SOLAS 74/78 II-2/53.2
    - Fixed fire detection and alarm system (vessels built after 01 FEB 92)
    - Fixed fire extinguishing system
    - Portable fire extinguishers and additional fire equipment
    - Ventilation system requirements
    - Explosion-proof fixtures
  - Vessels with cargo holds intended for carrying motor vehicles with fuel in their tanks — SOLAS 74/78 II-2/53.3
    - Fixed fire detection and alarm system (vessels built after 01 FEB 92)
    - Fixed fire extinguishing system
    - Portable fire extinguishers and additional fire equipment
    - Ventilation system requirements
    - Explosion-proof fixtures
  - Vessels carrying dangerous goods in packaged or solid bulk form — SOLAS 74/78 II-2/54, SOLAS 74/78 VII/1-6
    - Special requirements (see Tables 54.1, 54.2, and 54.3 of II-2/54.2.3 for specific requirements)
    - Document of Compliance (flag state)

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Pollution Prevention:

- ○ Equipment
  - Test automatic stopping device required for discharge — MARPOL Ax. I/6
  - Segregation of oil fuel and water ballast systems — MARPOL Ax. I/14
  - Oily residue tank (discharge arrangements, homogenizers, incinerators, etc.) — MARPOL Ax. I/17
  - Witness operational test of emergency shutdown — 33 CFR 155.780
- ○ Human Factors — STCW Table A-III
  - Oil and oily mixtures — MARPOL Ax. I
    - Responsible officer familiar with handling of sludge and bilge water
    - Quantity of residues generated
    - Capacity of holding tanks
    - Capacity of oil water separator
    - Note any inadequacies in reception facilities used; advise master to report these to flag state
  - Garbage — MARPOL Ax. V
    - Note any inadequacies in reception facilities used; advise master to report these to flag state
    - Crew familiar with Annex V requirements

Machinery Spaces:

- ○ Communication between navigating bridge and machinery space — SOLAS 74/78 II-1/37
  - Two means, one of which must be an engine order telegraph
  - Tested
- ○ Emergency source of electrical power — SOLAS 74/78 II-1/43, SOLAS 74/78 II-1/44
  - Location
  - Generator and/or batteries tested under load
  - Emergency lighting

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- ○ Main engine / vital auxiliaries (spot-check) — SOLAS 74/78 II-1/27
  - F/O pumps / piping
  - S/W pumps / piping
  - J/W pumps / piping
  - L/O pumps / piping
  - Piston cooling pumps / piping
  - Air compressors / receivers
  - Fuel / oil purifiers
  - H/O heaters / transfer pump
- ○ Steering gear alarms — SOLAS 74/78 II-1/29
  - Low hydraulic oil
  - Loss of power
  - Loss of phrase
  - Overload
- ○ Human Factors: determine if personnel are familiar with the operation of the following items — STCW Table A-III
  - Emergency generator:
    - Actions necessary before engine can be started
    - Different methods by which generator may be started
  - Stand-by generator engine:
    - Methods to start engine automatically or manually
    - Blackout procedures
    - Load-sharing system
  - Steering gear:
    - Action needed to bring main and auxiliary into operation
    - Changing steering from automatic to manual and vice versa
  - Bilge pumps:
    - Starting procedures for main and emergency bilge pump
    - Appropriate valves to operate
  - Fire pumps:
    - Starting procedures for main and emergency fire pumps
    - Appropriate valves to operate

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Section 6: Appendices

Recommended Port State Control Procedures:

The following flowcharts contain information gleaned from the Marine Safety Manual Volume II, Chapter 24. The port state control officer should be familiar with this chapter as well as the information pertaining to Port State Control examinations contained in MSM Volume II, Chapters 19—Foreign Vessel Exams (General), 22—Foreign Vessel Exams (Freight), and 23—Targeting of Foreign Vessel Boardings.

Considering the seriousness of the deficiencies, the OCMI or COTP must determine the appropriate control action to impose on these vessels to ensure the safety of the vessel, the port, and the environment. The degree of control imposed, as well as the authority used to exercise control, must be consistent with the nature of the deficiencies.

The following definitions and terms of reference are used in the MSM to describe key elements of Port State Control enforcement:

Clear Grounds. Evidence that the vessel, its equipment, or crew do not correspond substantially to the requirements of the relevant conventions or that the master or crew members are not familiar with essential shipboard procedures relating to the safety of vessels or the prevention of pollution.

Control. Control is the process of imposing a port state's or flag state's authority over a vessel to ensure that its structure, equipment, operation and crew meet applicable standards. The process is affected by any verbal or written directives from the OCMI/COTPs or their representatives, which require action or compliance by the vessel.

Detention. Detention is a control action that restricts a vessel's right of free movement. The imposition of a restriction on the movement of a vessel constitutes a detention regardless of whether or not a delay from a vessel's normal or expected itinerary occurs. Detentions may be carried out under the authority of the applicable international convention, the Ports and Waterways Safety Act (PWSA) or a Customs hold.

Intervention. An intervention is a control action taken by a port state, which interposes the port state's authority over a foreign flag vessel in order to cause the vessel to be brought into compliance with an applicable international convention. Interventions are undertaken by a port state when a vessel's flag state has not, can not, or will not exercise its obligations under an international convention to which it is a party. This may include requesting appropriate information, requiring the immediate or future rectification of deficiencies, detaining the vessel, or allowing the vessel to proceed to another port for repairs.

Nonconforming Vessel. Any vessel failing to comply with one or more applicable requirements of U.S. law or international conventions is a nonconforming vessel. A nonconforming vessel is not necessarily a substandard vessel unless the discrepancies endanger the vessel, persons on board, or present an unreasonable risk to the marine environment.

Substandard Vessel. In general, a vessel is regarded as substandard if the hull, machinery, or equipment, such as lifesaving, firefighting and pollution prevention, are substantially below the standards required by U.S. laws or international conventions, owing to:

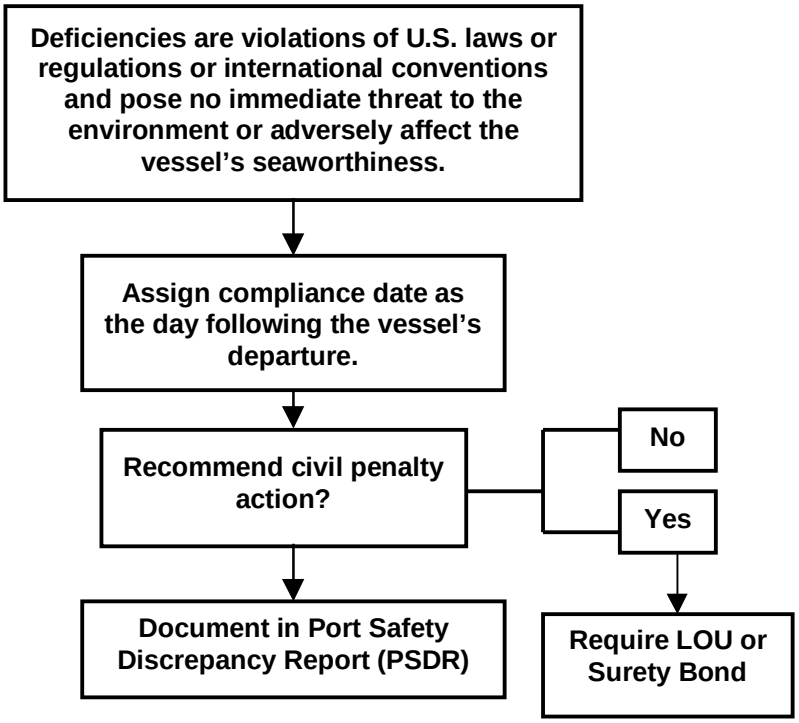
- The absence of required principal equipment or arrangement;
- Gross noncompliance of equipment or arrangement with required specifications;
- Substantial deterioration of the vessel structure or its essential equipment;
- Noncompliance with applicable operational and/or manning standards; or
- Clear lack of appropriate certification, or demonstrated lack of competence on the part of the crew.

If these evident factors as a whole or individually endanger the vessel, persons on board, or present an unreasonable risk to the marine environment, the vessel should be regarded as a substandard vessel.

Valid Certificates. A certificate that has been issued directly by a contracting government or party to a convention, or on the behalf of the government or party by a recognized organization, and contains accurate and effective dates, meets the provisions of the relevant convention, and corresponds to the particulars of the vessel and its equipment.

Requiring Corrective Measures Prior to Return to U.S.

(NO DETENTION)

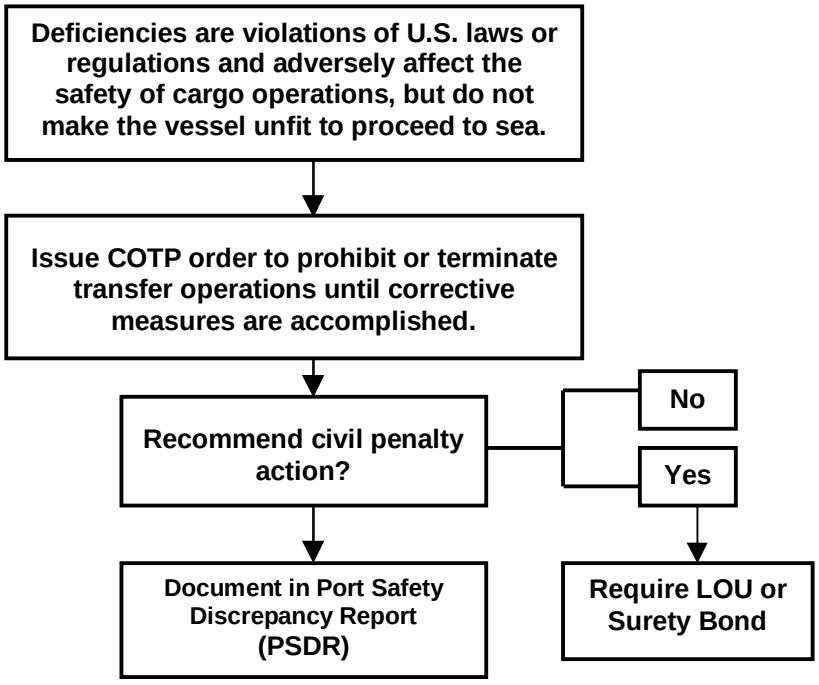


Examples include the following:

- Charts or nautical publications not currently corrected.
- Portable hoses have not been tested but appear in good condition.
- Actual location of safety equipment deviates from the vessel safety plan.
- Electrical fixtures in paint locker not appropriately certified for safe usage in hazardous location. (Operational controls, such as disconnecting the electrical power source or removing flammables from the space, may satisfactorily remove risk to vessel.)

Requiring Corrective Measures Prior to Cargo, Bunkering or Lightering Operations

(NO DETENTION)

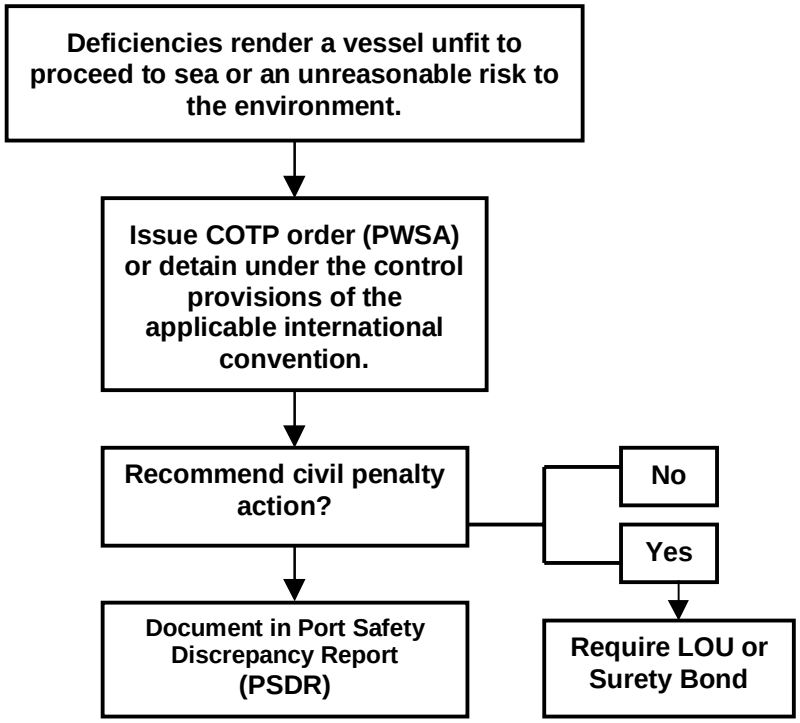


Examples include the following:

- Oil transfer procedures incomplete.
- Information on properties and hazards of cargoes not on board.
- High and low level alarms inoperative.

Requiring Corrective Measures Prior to Departure

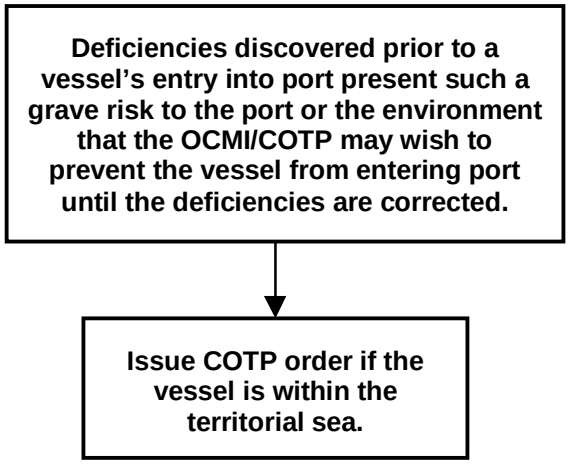
(DETENTION)



Examples include the following:

- Excessive wastage, corrosion, pitting, holes, or damage to the hull, cargo hatches, fire main, or other vital system.
- Inoperable emergency fire pump or emergency generator.
- Inability to lower lifeboats.
- Inoperable lifeboat motors (i.e., will not start).
- Crew incompetent to carry out duties (e.g., fire or boat drills, cargo transfer, stability calculations, etc.).
- Licenses invalid.
- Safe Manning Document not on board.

Requiring Corrective Measures Prior to Entry



Examples include the following:

- Leaking tanks.
- Carrying dangerous cargoes with expired documents.
- Carrying incompatible cargoes.
- Invalid ISM certificates.
- COFR not on board.

Detention Information:

NOTE: *Complete prior to recommendation.*

Verify owner (from DOC or COFR), operator, and mailing address.

Verify owner's agent.

Verify last and future drydock dates and locations.

If dual classed, who will respond? _____

Which agency issued the documents that have major problems?

What is the date of the last survey conducted for those items that have problems?

What are the vessel's plans to deal with the problems?

What is the crew's attitude toward the problems?

Is the detention ISM related? If so, include ISM certification information in the Detention Report to G-MOC-4.

Notes: _____

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Deficiency Summary Worksheet:

Name of Vessel _____ **VIN** _____

Deficiency	MSIS Code	Req't. Issued / Date Completed

Deficiencies identified should be listed with MSIS codes. At completion of inspection/examination, any outstanding deficiencies shall be entered in MIDR or PSDR as appropriate. All deficiencies found (outstanding and completed) shall be entered in the Deficiency Summary. Worklist items, which serve only as memory joggers to complete inspection/examination (e.g., test emergency fire pump), should not be coded as deficiencies.

MSIS Codes for Deficiencies:

BS	Ballast	**DC**	Dry Cargo	**IC**	I/C Engine
BI	Bilge	**ES**	Electrical	**LS**	Lifesaving
BA	Boiler, Aux.	**FF**	Firefighting	**MI**	Miscellaneous
BM	Boiler, Main	**FL**	Fuel	**NS**	Navigation
CS	Cargo	**GS**	General Safety	**PP**	Propulsion
DM	Deck Machinery	**HA**	Habitation	**SS**	Steering
DL	Doc., Lics., Pmts.	**HU**	Hull		

Conversions:

Distance and Energy				
Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)

Liquid ***(NOTE:*** *Values are approximate.)*

Liquid	bbl/LT	m^3/t	bbl/m^3	bbl/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05

Weight

1 Long Ton	=	2240 lbs	1 Metric Ton	=	2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	=	7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m^3	1 psi	=	.06895 Bar = 2.3106 ft of water

Temperature: Fahrenheit = Celsius (°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))

0	=	-17.8	80	=	26.7	200	=	93.3
32	=	0	90	=	32.2	250	=	121.1
40	=	4.4	100	=	37.8	300	=	148.9
50	=	10.0	110	=	43.3	400	=	204.4
60	=	15.6	120	=	48.9	500	=	260
70	=	21.1	150	=	65.6	1000	=	537.8

Pressure: Bars = Pounds per square inch

1 Bar	=	14.5 psi	5 Bars	=	72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi			
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi			